

[91-33/120(1):01]

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

MULTI-YEAR PLAN

JANUARY 1972

## I N T R O D U C T I O N

This is the first multi-year plan prepared by George Brown College. It has taken two years to prepare and involved senior administrative staff of the College and the Systems Research Group. The planning process has been stimulating (and sometimes frustrating) for all concerned. However, many new insights have been gained into the operation of George Brown College and the computer-based model is beginning to simulate the large scale components of the college to an acceptable degree of precision.

In future years it is anticipated that improvements will be made both in the model and the quality of the input data.

The report has been assembled in two folders for easy reference between input and output data. Parts I and II contain textual and tabulated input policies and data, while Part III consists of the computer print outs from the model.

## C O N T E N T S

<u>PART I</u>	<u>PAGE</u>
Descriptive Summary of the Plan .....	1
Academic Planning .....	3
 <u>PART II</u>	
Enrolment Projections (Summary) .....	15
Apprenticeship Enrolment Projections .....	16
Post-Secondary Enrolment Projections .....	17
Retraining Enrolment Projections .....	19
Manpower Trends .....	20
 <u>PART III</u>	
Administrative Indices .....	
- Physical Facilities .....	21
- College Summary .....	22
- Costs by Resource Type .....	23
 Program Enrolments .....	25
Space Requirements .....	26
Operating Grant Budget .....	27
Program Costs .....	31
 Estimated Income for Post-Secondary Programs for 1972-73 ....	32
References .....	33

PART I

DESCRIPTIVE SUMMARY

AND

ACADEMIC PLANNING

## DESCRIPTIVE SUMMARY OF THE MULTI-YEAR PLAN

The college plans to increase its enrolment of full-time students in all post-secondary and retraining programs over the period of 1971-76. At the same time an attempt will be made to change the proportion of students in the various programs by increasing the enrolment in the post-secondary sector at a greater rate than the others.

The greatest increase in enrolment is expected to occur in those post-secondary programs which are related to the health sciences, business & commerce, and the service and manufacturing industries.

It has been assumed that George Brown College will continue to enrol large numbers of students in retraining programs because Toronto attracts, annually, about 75 - 80,000 immigrants and rural migrants, many of whom need training in basic language, academic or craft skills before entering the labour market. While the actual enrolment levels in particular programs are subject to changing policies of Federal and Provincial governments, it is expected that the College will continue to receive financial support to train an increasing number of immigrants and unemployed over the next five year period.

It is also anticipated that there will be a growing demand for many members of the labour force to upgrade and update their skills by attending College on cooperative or part-time programs.

While the demand for journeymen, particularly in the construction trades, is expected to rise rapidly in the next decade, George Brown College will train a constant number of apprentices during the period 1971-76. Other Colleges of Applied Arts & Technology are expected to expand their facilities in response to local demands. It should be noted that George Brown College has traditionally drawn apprentice students from all parts of the Province.

Economics of scale are anticipated as the College consolidates its programs in three main campuses.

It should be noted that the theoretical model designed by the Systems Research Group differs from the actual college operation in many ways. For example, the simulated periods for the three terms, fall, winter and summer are 17, 23 and 10 weeks respectively. These periods were agreed upon by the S.R.G. staff in consultation with College and Department of Education Officials.

As a consequence, it will be noticed that the model uses slightly different enrolment numbers from those generated by the college. However, the annual cost figures are correct. The basic unit for calculation is the student contact hour and it makes no difference to the end cost result if we have a section of 17 students for 23 weeks or a section of 23 students for 17 weeks.

ACADEMIC PLANNING

The College is presently divided into eleven teaching departments directed by Chairmen who report to the President. Two departments provide academic services to the nine which prepare graduates for specific vocations. Each Chairman is responsible for all full-time and part-time programs in his area of training. Typically, a Chairman directs programs for technicians, apprentices, retraining and extension students.

The College has a policy of integrating students into the College community and offering equality of educational experiences to all. This policy is actively pursued by Chairmen and College Administrators both within and without the curriculum.

During the multi-year planning period it is anticipated that several major changes will occur in the expectations of potential students and members of the local community towards the ways in which George Brown College will provide educational and training services. In particular, George Brown College will develop a flexible approach to scheduling courses.

Chairmen are presently examining the consequences of extending the use of the physical facilities beyond the present 14 hour day and five-day week schedule. Arrangements for providing full-time courses to suit students who are working a four-day week are being explored. Extending the apprenticeship and co-operative type program to embrace a wider variety of programs is also being considered.



At the same time it is hoped that the College will become flexible enough to admit students to programs at times convenient to them. Presently, many programs have only one starting date each year.

Most Chairmen anticipate an increasing use of audio-visual aids to enhance the teachers' ability to spend a large proportion of his time with individual students rather than groups. It is possible that the greatest changes will occur in those courses which have become known as academic. Teachers in shop and laboratory settings have traditionally devoted most of their time to individualized instruction.

Providing students with some measure of freedom in the choice of courses within a program of study will become common over the quinquennium planning period.

Although the College will be working towards several broadly defined goals, individual departments are becoming specific about the aims and objectives of their programs.

The following paragraphs summarize the present views of the teaching departments at George Brown College.

#### THE ACADEMIC DEPARTMENT

This department is one of the largest in the College and provides courses in Mathematics, Science, English and other 'academic' subjects to the vocational departments.

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE V

Page 3.

TRAINING DAYS							
MANPOWER RETRAINING PROGRAMS	Course No.	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Nursery Aide	AP 51	4,305	4,400	7,340	7,480	7,630	7,800
Offset Printing	G 42	15,074	10,180	10,670	10,900	11,100	11,300
Offset Printing for Letter Pressman	G 70	1,757	3,225	5,370	5,470	5,570	5,680
Oil Burner Servicing	AR 41	8,552	3,765	6,110	6,230	6,350	6,470
Orientation	AR 70	9,198	275	459	467	475	484
Power Sewing	ST 42	8,244	12,770	21,300	21,800	22,200	22,700
Refrigeration and Air Conditioning	AR 44	8,025	7,330	12,200	12,400	12,600	12,800
Retail Meat Cutting	F 44	9,299	6,905	10,500	10,700	10,900	11,100
Signwriting	AR 46	2,146	2,475	4,120	4,200	4,280	4,370
Typing General Office	B 57	14,957	9,040	15,100	15,400	15,700	16,000
Tractor Trailer Driver	ST 75	4,175	1,900	3,170	3,230	3,300	3,360
Typing Refresher	B 74	6,046	10,680	17,800	18,100	18,500	18,900
Welder Fitter	EN 51	13,367	9,090	15,200	15,500	15,800	16,100
Welder Fitter Refresher	EN 54	1,034	2,250	3,750	3,820	3,900	3,980
Photo Reproduction	G 73	230	1,000	1,660	1,690	1,720	1,750

'Teaching Machines' are used in remedial work chiefly in the areas of English and basic communications skills. Mathematics laboratories are in the developmental stages and science centres are being planned. Many subjects will be taught on a modular system which will enable individual differences to be recognized and permit students to proceed through programs at their own pace. It is expected that one consequence of these moves will be an increase in the number of non-teaching staff - technicians, secretaries and clerks - in the academic department. However, the hourly costs will remain constant.

The department has developed 'performance objectives' for most of its courses which are regarded as an integral part of the systems approach to learning.

If College policies demand an emphasis to be placed on broadening the curriculum, the academic department will be expected to give particular attention to the social sciences.

## THE ENGLISH (AS A SECOND LANGUAGE) DEPARTMENT

The department's chief concern is with students who are non-English speaking immigrants. A series of short, intensive courses in classes of twenty enables most graduates to handle effectively their basic social and employment communications, within eight to twelve weeks.

Language laboratories are an integral part of the language program. However, there appears to be no significant saving in cost arising from their use.

The department is examining the possibility of the need for a course to orient native Canadians toward the cultures of immigrant groups. Language is viewed as an intercultural art which could be studied in an international institute to the mutual benefit of native and immigrant Canadians.

Native language counselling is regarded as important for immigrants who cannot speak English. It is hoped to improve this service in the near future.

Closer ties are expected to be established between the College and ethnic organizations in order to help new immigrants to settle in Canada.

The department will become increasingly concerned with providing specialized courses, some at advanced levels, to technical and professional immigrants who need language qualifications to practise in Ontario.

#### DEPARTMENT OF FOOD TECHNOLOGY

This department trains graduates to work in the food preparation and food service industries.

It is anticipated that the present rigidly structured programs will be replaced by a flexible system of training students in subjects which match their interest and match specific industrial needs. Diplomas will be awarded which show student's training profiles.

Entrance requirements will not include academic qualification for most courses. It is hoped to be able to simulate conditions in the food industry by operating programs over a 3 shift system each day (7 days per week). Training to meet industrially prescribed objectives will become the norm.

Plans are being prepared to train students within a financially successful hotel environment. Staff members from the hotel and the College will co-operate in developing the training program.

Use of computer programs to simulate the operation of a hotel will become normal practice in the near future. Techniques of management will be taught by using the computer and other simulator devices.

## GRAPHIC ARTS DEPARTMENT

This department is presently using several packages of programmed instructional (P.I.) materials in training students in skill techniques. P. I. enables students to work on an individually designed timetable and permits faculty to spend more time with individual students than with groups.

The department is planning a curriculum which will permit continuous intake. Students will be able to register and begin their studies at almost any time during the year. It is hoped that the College hours and days will be extended to meet the needs of students who can only attend courses during week-ends and evenings.

An integration of training-in-industry and College training is anticipated with College and Industrial staffs working towards common training goals. The College will develop the capacity to undertake specific product evaluations and tests mainly in support of small businesses that cannot afford to establish extensive shop and laboratory facilities.

## DEPARTMENT OF APPLIED ARTS

The concern of this department is with programs designed to prepare graduates for work in the field of human well-being. Presently Nursing, Youth and Child Care are the most important programs. It is anticipated that students will continue to be interested in these programs.

In the future there will be an increase in the proportion of retired and elderly people in our population who will require various human services. This department is exploring ways in which it can prepare qualified workers for this field.

There is a growing concern in Ontario for the need to provide day-care centres for infants. There are presently only three centres in Toronto but another eighteen have been planned. George Brown College will be expected to train Child Care workers to meet these needs.

Programs in the Applied Arts department will continue to place great emphasis on field work during the training period and to a great extent enrolments will be limited only by the availability of suitable facilities in field offices.

The current practice of involving final year students in selecting first year students for the Drug Addiction course will continue. The process will be tried in other programs.

## ARCHITECTURAL TECHNOLOGY

The function of this department is to train students in the building construction industry. The demand for graduates from most programs is expected to rise to reflect the building and rebuilding projects of a modern civil society. Although new technologies and new techniques will develop, the College will be concerned with the training of a large group of skilled technologists and craftsmen in the traditional areas of skill. Increasing emphasis, however, will be placed on offerings for graduates of several years standing who wish to update or improve their skills.

The department expects to respond to pressures from the local community by offering do-it-yourself courses related to the needs of the private home owner.



## BUSINESS & COMMERCE

Some programs offered in this department lend themselves to the use of audio-visual techniques. For example, skills at shorthand and typing can be acquired rapidly with a minimum of direct teacher involvement.

The Business and Commerce department plans to offer programs made up from individually selected courses. An appraisal approach will be used to judge students competencies in particular courses. It is hoped to avoid requiring students to 'take' courses in which they already show adequate skills.

Part-time studies will be encouraged and the length of the operating day will be extended to meet the needs of part-time students who will form a large proportion of the future enrolment.

#### ELECTRONICS/ELECTRICAL DEPARTMENT

Considerable changes in teaching techniques will be made in the next few years. Faculty members are presently working to increase the number of individual learning programs (I.L.P.) which involve audio-visual apparatus.

It has been found that many skills, such as, soldering, can be acquired by a student with a very small involvement of faculty time.

The department anticipates an increase in the lengths of the teaching day and week to accommodate part-time students who have full-time jobs.

Calculations have been made which indicate that technicians and technologists can aid the instructor in laboratory and shop programs and lead to a reduction in the overall per diem costs of training.

It has been suggested that teachers become involved with the development of the software for (I.L.P.) on a scheduled basis, i.e. periods be allocated for developmental work as well as for teaching.

## MARINE TECHNOLOGY

The programs offered by this department are operated in co-operation with the Federal Department of Transport and the Marine Industry. Students are prepared to qualify as Deck and Engineering Officers.

It is expected that all graduates will continue to be placed in jobs for which they have been trained because the programs are operated on a mix of sea and land training. Students quickly come to understand their employment prospects during their periods of on-the-deck experience.

Presently there are only a handful of places in Canada offering marine programs and students are drawn to George Brown College from all parts of the country.

Future prospects for the department are good and it is expected to double the enrolment over the next five years.

As navigational techniques continue to improve and to involve greater use of scientific equipment, the department will be called upon to give short, intensive courses to various deck officers. Simulator units will become an indispensable part of the training program and the location of these units will become a matter of great concern to Federal and Provincial Governments because of the high capital costs involved.

#### SPECIAL TECHNIQUES DEPARTMENT

Many programs in this department are expected to be operated in close co-operation with local industries. The department offers a wide variety of programs mainly in response to demands from the Manpower Department.

It is anticipated that there will be an increase in the number of post-secondary programs offered by this department including Creative Fashion, a fur course and pattern drafting.

PART II

ENROLMENT PROJECTIONS

•

### ENROLMENT PROJECTIONS

Enrolment projections have been made for each program offered by the College for the period 1971-76.

The projections were prepared jointly by senior staff of George Brown College after an extensive study of the available literature on the Canadian labour market 1) 2) 3) 4) 5) 6) and population trends 6) 7).

Table I shows the projected enrolment for each year of the period 1971-76. It should be noted that the method of computing full-time equivalent (F.T.E.) students is different for each program but is in agreement with policies set by the Ontario Department of Colleges and Universities. Table II shows the number of Training Days (T.D.) which correspond to the enrolments in Table I.

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE I

PROJECTED ENROLMENTS FOR MULTI-YEAR PLAN (FULL TIME EQUIVALENT)

PROGRAM	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Apprenticeship	769 <sup>1)</sup>	676 <sup>1)</sup>	754	757	767	767
Post Secondary						
- Extension (Category I)	1,000 <sup>2)</sup>	1,150 <sup>2)</sup>	1,300	1,450	1,600	1,700
- Full-Time (Category II, III, IV)	659	1,209	1,859	2,253	2,419	2,539
Retraining	4,775 <sup>3)</sup>	4,310 <sup>3)</sup>	4,850	5,080	5,180	5,280
C.O.S.T.I.	(37)*	140 <sup>4)</sup>	150	Included in Retraining		
SUB-TOTAL	7,203	7,485	8,913	9,540	9,966	10,286
T.I.B.I.	2,500	2,521	2,600	2,700	2,700	2,700

1) Computed by dividing Training Days by 200

2) Computed by dividing Training Days by 84

3) Computed by dividing Training Days by 240

4) Computed by dividing Training Days by 200

\*Not included in Total

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE II

PROJECTED TRAINING DAYS FOR MULTI-YEAR PLAN

PROGRAM	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Apprenticeship	153,736	135,200	150,800	151,400	153,400	154,000
Post Secondary						
- Extension (Category I)	84,000	96,600	109,200	121,800	134,400	142,800
- Full-Time (Category II, III, IV)	98,917	181,350	278,850	337,950	362,850	380,850
Retraining	1,146,017	1,033,125*	1,167,500	1,220,000	1,245,000	1,270,000
C.O.S.T.I.	(7440)**	28,150*	30,000	Included in Retraining		
TOTALS	1,482,670	1,474,425	1,736,350	1,831,150	1,895,650	1,947,650

\* Approved November 8, 1971

(Department of Colleges & Universities)

\*\* Represents the period January to March - not included in total.



E N R O L M E N T   P R O J E C T I O N S

B Y   P R O G R A M

## APPRENTICESHIP

The demand for journeymen is expected to increase by about 16% during the period 1971-75 <sup>1)</sup> but most of this increase is expected to be met by other Colleges in Ontario.

Table III shows the apprenticeship projections by program enrolment for each year of the period 1971-76. It should be noted that the College expects to have five groups of 40 Millwright apprentice students during the year 1972-73.

THE GEORGE J. OWN COLLEGE  
of Applied Arts and Technology

TABLE III

APPRENTICESHIP TRAINING PROGRAMS			1971-72		1972-73		1973-74		1974-75		1975-76	
Baking	F	45	2 x 20	40	2 x 15	30	2 x 15	30	2 x 15	30	2 x 15	30
Barbering	ST	70	2 x 15	30	2 x 15	30	2 x 20	40	2 x 25	50	2 x 25	50
Carpentry	AR	70	5 x 60	300	5 x 60	300	5 x 60	300	5 x 60	300	5 x 60	300
Cement Mason	AR	80	5 x 20	80	5 x 20	100	5 x 20	100	5 x 20	100	5 x 20	100
Chef Training	F	46	2 x 60	120	2 x 70	140	2 x 70	140	2 x 80	160	2 x 80	160
Electr. Construction	EL	70	5 x 120	600	5 x 160	800	5 x 160	800	5 x 160	800	5 x 160	800
Glazier & Metal Mech.	AR	81	3 x 16	48	3 x 16	48	4 x 16	64	4 x 16	64	4 x 16	64
Hairdressing	ST	71	5 x 30	150	5 x 30	150	5 x 30	150	5 x 30	150	5 x 30	150
Ironworker	EN	70	5 x 20	100	5 x 25	125	5 x 25	125	5 x 25	125	5 x 25	125
Lathing	AR	71	4 x 20	80	4 x 20	80	4 x 20	80	4 x 20	80	4 x 20	80
Machinist	EN	71	5 x 40	200	5 x 40	200	5 x 40	200	5 x 40	200	5 x 40	200
Masonry & Bricklaying	AR	72	5 x 20	100	5 x 20	100	5 x 20	100	5 x 20	100	5 x 20	100
Millwright	EN	72	5 x 40	200	5 x 40	200	5 x 40	200	5 x 40	200	5 x 40	200
Painting & Decorating	AR	73	2 x 16	32	2 x 16	32	2 x 16	32	2 x 16	32	2 x 16	32
Plastering	AR	74	2 x 16	32	2 x 16	32	2 x 16	32	2 x 16	32	2 x 16	32
Plumbing	AR	75	5 x 60	300	5 x 60	300	5 x 60	300	5 x 60	300	5 x 60	300
Radio & Television	EL	42	2 x 30	60	2 x 30	60	2 x 30	60	2 x 30	60	2 x 30	60
A/C and Refrigeration	AR	76	5 x 20	100	5 x 25	125	5 x 25	125	5 x 30	150	5 x 30	150

THE GEORGE J. CROWN COLLEGE  
of Applied Arts and Technology

TABLE III (Cont'd)

APPRENTICESHIP TRAINING PROGRAMS			1971-72	1972-73	1973-74	1974-75	1975-76
Retail Meat Cutting	F 47	1 x 3 3	1 x 0 0	1 x 0 0	1 x 0 0	1 x 0 0	1 x 0 0
Sheet Metal Mech.	AR 77	5 x 60 300	5 x 80 400	5 x 80 400	5 x 80 400	5 x 80 400	5 x 80 400
Steamfitting	AR 78	5 x 80 400	5 x 80 400	5 x 80 400	5 x 80 400	5 x 80 400	5 x 80 400
Structural S. Draft.	AR 79	1 x 0 0	1 x 15 15	1 x 15 15	1 x 15 15	1 x 15 15	1 x 15 15
Toolmaking	EN 74	5 x 20 100	5 x 20 100	5 x 20 100	5 x 20 100	5 x 20 100	5 x 20 100
Watchmaking	EN 80	1 x 8 8	1 x 5 5	1 x 10 10	1 x 10 10	1 x 10 10	1 x 10 10
TOTALS			3385	3772	3803	3858	3858
F.T.E.			676	754	757	767	767

## POST SECONDARY

The following factors were considered in making enrolment projections for the Post-Secondary programs.

1. The distribution of post-secondary students in the five colleges in the Metro region is biased against George Brown College. For example, the enrolments <sup>6)</sup> for the year 1969/70 were distributed as:

	<u>Enrolment</u>	<u>%</u>	<u>%</u>
SENECA	2,160	26.8	8.2
CENTENNIAL	2,005	24.9	7.8
HUMBER	1,794	22.4	6.8
SHERIDAN	1,378	17.2	5.2
GEORGE BROWN	698	8.7	2.7
METRO TORONTO	8,034	100.0	30.3
ONTARIO	25,446		100.0

### Average College Enrolments

Ontario 1,272

Metro 1,607

2. In 1969/70 there were 115,000 university students in Ontario <sup>7)</sup>. This number represented 13% of the age group 18-24 years.

It has been estimated <sup>7)</sup> that in 1980-81 about 20% of the 18-24 year age group will be attending universities in Ontario.

In 1969/70 the enrolment at CAAT was 25,446 <sup>6)</sup> (i.e. about 2.6% of the 18-24 year age group.)

3. Estimates <sup>6)</sup> of enrolments at CAAT in Ontario and Metro Toronto for the period 1971-76 are:

	<u>1971-72</u>	<u>1972-73</u>	<u>1973-74</u>	<u>1974-75</u>	<u>1975-76</u>
ONTARIO	27,800	30,000	32,400	35,000	37,200
METRO	9,270	10,000	10,800	11,700	12,400

We anticipate that the opening of the Casa Loma Campus in the fall of 1972 and a downtown campus in the fall of 1973 will cause the enrolment of students in post-secondary programs to increase to nearly one fifth of the enrolment in the Metro Colleges.

The following enrolments are expected:

<u>1971-72</u>	<u>1972-73</u>	<u>1973-74</u>	<u>1974-75</u>	<u>1975-76</u>
1,209	1,859	2,253	2,419	2,539

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE IV

Post Secondary Programs  
Enrolment Projections

	Course No.	1971-72	1972-73	1973-74	1974-75	1975-76
Design Technician	EL 1	0	15	20	20	25
Electrical Technician	EL 2	35	55	60	60	60
Electrical Technician	EL 3	103	135	140	140	140
Instrument Technician	EN 1	24	25	26	28	30
Plastics Technician	EN 2	22	25	28	30	30
Tool and Die Design	EN 3	17	20	25	28	32
Tool Making Technician	EN 4	27	28	32	35	38
Machine and Product Design	EN 5	28	21	32	35	38
Process Pipe Design	EN 6	0	6	14	20	25
Materials Handling Design	EN 7	0	6	16	22	25
Materials Evaluation	EN 8	0	8	16	18	18
Coating Technology	EN 9	2	10	16	18	18
Orthotic Prosthetic	EN 10	26	37	42	42	42
Precision Inst. Techniques	EN 12	6	12	14	15	17
Instrumentation	EN 14	11	15	17	20	25
Plastics - Thermoset	EN 49	2	2	4	4	6
Plastics - Moulding	EN 48	0	5	5	5	5
Welding Specialist	EN 53	15	15	15	15	15
Plastics - Thermoplastic	EN 50	0	2	2	4	4
Food Processing	F 1	14	17	20	22	22
Dietary Services	F 2	4	10	15	15	20
Food Administration	F 3	18	20	25	25	25
Hotel/Motel Administration	F 4	39	60	60	60	80
Graphic Arts	G 1	63	85	85	90	95
Child Care Worker	AP 1	87	100	100	100	100
Dental Technician	AP 2	47	40	40	40	40
Addiction Counsellor	AP 3	19	38	38	38	38
Jewellery Arts	AP 4	27	25	30	35	35
Day Care Worker	AP 5	20	38	38	40	40
Dental Assistant	AP 41	19	36	36	36	36
A/C Technician	AR 1	35	45	50	50	50

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE IV (Page 2)

Post Secondary Programs  
Enrolment Projections

	Course No.	1971-72	1972-73	1973-74	1974-75	1975-76
Survey Technician	AR 2	40	45	50	50	50
Construction Technician	AR 3	29	32	35	40	50
Arch. Drafting Techn.	AR 4	77	90	90	90	90
Drafting Technician (General)	AR 5	0	15	25	25	25
Survey Technologist	AR 6	0	20	35	40	40
Drafting Mechanic	AR 7	0	20	35	35	40
Drafting Struc. Techn.	AR 8	0	15	25	25	25
Concrete Technician	AR 9	4	10	15	20	20
Accounting	B 1	31	80	120	145	145
E.D.P.	B 2	22	51	95	100	135
Marketing	B 3	14	50	100	140	140
Bus. Administration General	B 4	68	110	120	120	120
General Secretarial Science	B 5	36	53	80	80	80
Legal Secretarial Science	B 6	7	20	25	30	30
Medical Secretarial Science	B 7	8	20	30	30	30
Sales	B 42	0	15	25	25	30
Graphic Design Techn.	G 2	49	55	60	60	60
Marine Officer Cadet (Engineer)	M 1	21	35	35	40	40
Navigation Officer Cadet	M 2	18	40	40	45	45
Creative Fashion	ST 1	16	30	45	50	50
Watchmaking	EN 11	9	12	12	14	15
Baking Technologist	F 40	4	15	20	25	25
Chef, (Pre-employment)	F 42	31	40	45	50	50
Chef, (Hospital)	F 50	15	30	30	30	30
TOTALS		1209	1859	2253	2419	2539



THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE V

TRAINING DAYS							
MANPOWER RETRAINING PROGRAMS	Course No.	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Appliance Servicing	AR 45	12,767	9,230	9,420	9,600	9,800	10,000
Basic Training for Skill Development	AS 42	183,989	160,000	198,510	202,500	206,530	208,000
Blueprint Reading	AR 83	2,538	2,655	4,420	4,500	4,590	4,700
Blueprint Reading for Welders (Basic and Advanced)	EN 76 EN 77	522	2,950	4,920	5,000	5,100	5,200
Business Equipment Servicing	EN 41	2,605	4,000	6,670	6,800	6,930	7,080
Business Machines	B 73	775	240	400	407	415	423
Business Machines & Bookkeeping	B 51	17,717	23,790	39,900	40,700	41,500	42,300
Certified Building Custodians	ST 73	8,129	11,780	19,500	19,900	20,300	20,700
Certified Visiting Homemakers	AP 72	934	2,250	3,750	3,820	3,900	3,990
Chef Refresher	F 46	1,626	600	1,000	1,020	1,040	1,060
Clerk Typists - Special	B 53	41,772	21,550	35,900	36,600	37,300	38,000
Color T.V.	EL 71	2,307	2,050	3,420	3,490	3,560	3,630
Commercial Accountancy	B 54	46,861	36,780	61,100	62,200	63,400	64,600
Commercial Art	G 43	11,028	5,665	9,440	9,630	9,840	10,000
Commercial Clerical	B 52	87,771	46,870	78,100	79,500	81,000	82,500
Commercial Refresher	B 56	5,524	10,000	16,600	16,900	17,200	17,500
Commercial Stenographic	B 45	24,259	28,100	46,900	47,700	48,500	49,500

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE V

Page 2.

TRAINING DAYS							
MANPOWER RETRAINING PROGRAMS	Course No.	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Commercial Vehicle Operators	ST 74	3,571	1,725	2,880	2,940	3,000	3,060
Cook Training Pre-apprenticeship	F 43	3,062	3,720	6,200	6,320	6,440	6,600
Drafting General	AR 40	9,092	3,335	5,500	5,610	5,720	5,830
Dining Room Service	F 70	3,380	3,950	6,560	6,690	6,820	6,950
Dressmaking and Alterations	ST 41	7,152	3,210	5,360	5,460	5,570	5,670
Electronics	EL 41	34,799	18,425	30,700	31,300	31,900	32,500
Electronic Data Processing I	B 70	8,678	1,240	2,070	2,110	2,150	2,190
Electronic Data Processing II and III	B 71						
	B 72	1,365	1,450	2,420	2,470	2,520	2,570
English as a Second Language	LT 40	413,299	240,000	231,305	235,930	239,650	244,450
Fur Business and Manufacturing	ST 43	3,412	4,525	7,530	7,660	7,810	7,960
Furniture Refinishing and Repair	ST 52	2,958	2,680	4,460	4,550	4,640	4,740
Furniture Upholstery and Repair	ST 53	9,963	7,710	12,900	13,200	13,500	13,800
Garment Pattern-making and Design	ST 40	3,780	3,025	5,050	5,150	5,250	5,350
Hospital Food Supervisor							
Hospital Orderly	AP 50	2,106	1,800	3,000	3,060	3,120	3,180
Instrumentation Mechanic	EN 42	6,884	3,925	6,520	6,640	6,770	6,900
Inventory Control Warehouseman	B 55	7,978	8,775	14,600	14,900	15,200	15,500
Machine Shop	EN 44	13,860	8,790	14,700	15,000	15,300	15,600

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE V

Page 4.

TRAINING DAYS							
MANPOWER RETRAINING PROGRAMS	Course No.	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Film Assembly	G 74	--	400	660	672	685	700
Photo Composition & Paste-Up Assembly	G 72	--	1,000	1,670	1,700	1,730	1,770
Marine Engineers	M 40	882	4,800	8,000	8,150	8,300	8,450
Marine Navigation Officer	M 41	1,517	4,800	8,000	8,150	8,300	8,450
Legal Secretary	B 40	--	480	-----	PROGRAM DISCONTINUED		-----
Medical Secretary	B 41	--	1,600	-----	PROGRAM DISCONTINUED		-----
Packing House Production Meat Cutter	F 49	--	500	835	850	866	884
Hairstyling	ST 72	--	300	500	510	520	530
I. T. U. - International Typographers' Union (various courses)			9,000	15,000	15,300	15,600	15,900
Heavy Construction	AR 84	352	3,000	5,000	5,100	5,200	5,300
Bakery (Pre-employment)	F 41	--	4,000	6,670	6,800	6,930	7,070
Lathe Operator	EN 75	--	1,200	2,000	2,040	2,080	2,120
V.T. Recorders	EL 72	--	1,125	1,870	1,910	1,940	1,980
Screen Process Printing	G 40	--	2,250	3,750	3,820	3,900	3,980
Commercial Dicta-Typist	B 58	--	5,250	8,750	8,920	9,100	9,300
Drywall Tapers	AR 82	--	1,290	2,170	2,210	2,250	2,290

THE GEORGE BROWN COLLEGE  
of Applied Arts and Technology

TABLE V

Page 5.

TRAINING DAYS							
MANPOWER RETRAINING PROGRAMS	Course No.	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Protection and Security	ST 76	--	2,175	3,620	3,690	3,760	3,830
Occupational English for Prov. Tradesmen	LT 71	2,490					
Industrial Production Orientation	EN 78	--	3,000	5,000	5,100	5,200	5,300
Heating Technician	AR 42	--	2,175	3,620	3,690	3,760	3,840
C.O.S.T.I.		7,440	28,150	30,000	Included in Retraining		
Additional Activity at G. B. C. Varitype Operator	G 71	-- 1,457	146,700	Course Discontinued			
Unassigned		--	66,000	53,931	84,744	73,019	93,479
TOTALS		1,146,017	1,061,275	1,197,500	1,220,000	1,245,000	1,270,000

## MANPOWER TRENDS

Historical trends 2) 4) and anticipated manpower requirements suggest that the demands for trained manpower in the 1970's will be greatest in the craft and production process areas. These are the areas covered by the apprenticeship and technician programs presently offered at George Brown College.

The same sources 1) 2) 3) suggest that demand will also be great in professional and technical areas which include all occupations in the health sciences.

A rising demand 1) 2) 4) will also be found in the service, clerical and recreational fields although not as great as the craft, professional and technical ones.

With the exception of mining and quarrying there will be an outflow of workers from the primary industries 1) 2) 4).

Factors which may affect enrolments in post-secondary programs at George Brown College but not accounted for in these data.

1. The degree granting status of Ryerson may lead to the need for George Brown College to establish more diploma and certificate programs in Business and Technology.
2. Universities may decide to ask colleges to handle programs which do not lead to a degree.
3. Programs in the health sciences may be transferred to the colleges.
4. Post-Secondary education may be redefined.

PART III

ADMINISTRATIVE INDICES

PROGRAM ENROLMENT

SPACE REQUIREMENTS

OPERATING GRANT BUDGET

PROGRAM COSTS

ANTICIPATED INCOME FOR POST-SECONDARY

PROGRAMS FOR THE YEAR 1972-73

A D M I N I S T R A T I V E I N D I C E S

## PHYSICAL FACILITIES

( Reference:        S.R.G. Summary Report Page 1)

Although the S.R.G. print-out shows an increasing discrepancy between available and needed space during the period 71-76 it should be noted that the Department of Colleges & Universities has agreed that the model only take account of existing and not planned space. Hence, at George Brown College, the space inventory for 1973-74 shows only 727,110 square feet available because Phase II (Casa Loma) is not included.

The Director of Planning at George Brown College gives the following estimates for the period 73-74.

KENSINGTON	173,754	sq. ft.
CASA LOMA	148,323	" "
PHASE II	329,678	" "
COLLEGE ST.	79,384	" "
ST. JAMES	280,000	" "
MACPHERSON	<u>32,431</u>	" "
<u>TOTAL</u>	1,043,570	sq. ft.

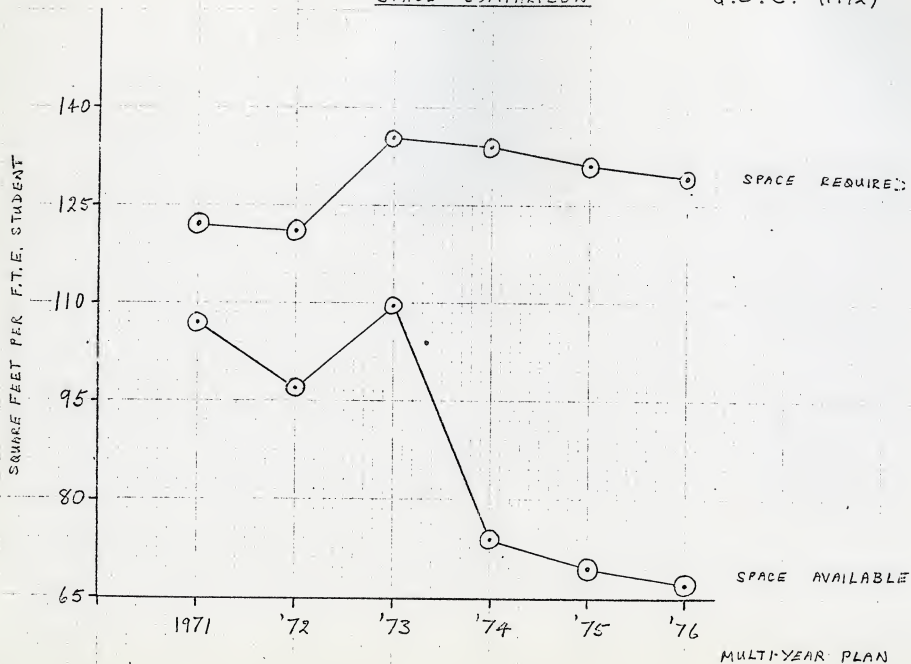
The space shortage in 1973-74 will then be 280,000 square feet and not 600,000 square feet as indicated by the S.R.G. print-out.

Graph I compares the space available with the space required over the period 1971-76.



GRAPH I  
SPACE COMPARISON

G.B.C. (1972)



### COLLEGE SUMMARY

(Reference: S.R.G. Summary Report Page 2 )

#### College Totals

The column headed 1970-71 should be ignored because a considerable amount of fictitious data was used merely to test the ability of the model to handle George Brown College data.

The operating cost is lower by several percentage points in the period 73-76 because fringe benefit changes were 'lost' in the current model run. These errors will be corrected before the next print-out is produced.

#### Unit Costs

The numbers printed in the row 'total cost per F.T.E. student' have been computed by equating the numbers 500, 900, 1200 and 1440 and are consequently of doubtful value.

It should be noted that, while there is a steady rise in teaching costs, the cost of hourly instruction remains nearly constant over the simulated period.

PERCENTAGE COST BREAKDOWN BY RESOURCE TYPE

There is a dramatic change in the percentage of the college budget allocated to teachers salaries over the academic years 71-76. Part of this change results from a reduction in rental charges.

The size of the non-teaching salaries can be attributed to the fact that many staff are paid according to salary schedules established by the Adult Education Centres of Toronto prior to their amalgamation with George Brown College.

## PROGRAM CATEGORY

### post-Secondary

Unfortunately, all post-secondary programs have been added together - (part-time and full-time). This addition leads to meaningless numbers in rows entitled 'average student contact load per week' and 'number of F.T.E. students'.

A more careful analysis than has been made by S.R.G. shows an average weekly student contact load of 27.3 hours for a full-time student who attends 40 weeks each academic year. (Part-time students attend 50-60 hours per academic year).

### Other Programs

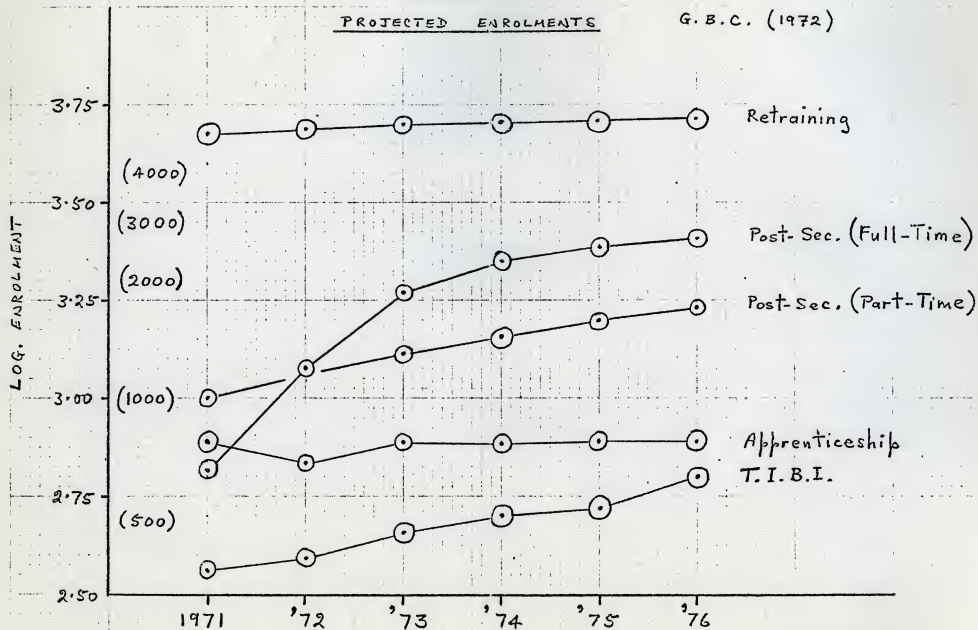
These analyses are in accord with College practices and policies.

P R O G R A M E N R O L M E N T

GRAPH II

PROJECTED ENROLMENTS

G.B.C. (1972)



MULTI-YEAR PLAN

## PROGRAM ENROLMENT

(Reference: S.R.G. Report AY04 31 Pages )

The following pages show the detailed enrolment figures used for each program over the simulated period. All these data were deduced from Tables III, IV and V quoted in PART II of this report.

Model restraints force George Brown College to be simulated over a year of 50 weeks divided into three terms of 17, 23 and 10 weeks respectively. This arrangement is unique to George Brown College and leads to large errors in the fine (term) structure but small ones in the large (annual) structure.

No new programs have been introduced into the current 'run' of the model. They will be introduced later.

A few programs show zero enrolment, because program errors of less than 1% were considered tolerable for this 'run'. (There are no programs with zero enrolment planned by the College).

Graph II shows the projected enrolments (on a logarithmic scale) for the major program areas.

S P A C E R E Q I R E M E N T S



TOTAL SPACE ( REQUIRED AND AVAILABLE )

(Reference: S.R.G. Report AY03 )

Most of the data in the 'Total Space' report is correct and is in agreement with current analyses made by the Director of Planning.

Minor computer errors are evident (in the inactive space row, for example) but may be considered insignificant at this stage.

O P E R A T I N G   G R A N T   B U D G E T

OPERATING GRANT BUDGET

(Reference: S.R.G. Report FY02 15 Pages )

The data is shown in the format agreed upon by the Department of Colleges & Universities and Provincial College Administrators.

Nurse training has been included under part-time and O.M.S.D. under T.I.B.I. for the convenience of the present 'run'.

COST CENTRE SPACE

(REQUIRED AND AVAILABLE )

(Reference: S.R.G. Report AY02 8 Pages )

The data in this table is mainly correct and represents College space needs for the period 70-76.

Minor computer errors are evident in the print-out for Bloor, Keele and Teraulay Campuses.

COSTS BY COST CENTRE CATEGORY

(Reference: S.R.G. Report FY04 9 Pages )

The categories used in this report are ones agreed upon during discussions with officials from the Department of Colleges and Universities. All Colleges use the same categories.

The major computer error in this report involves the Fringe Benefits section. It is expected that fringe benefits will exceed 15% of salaries by the year 1975-76.

OPERATING GRANT BUDGET

(Reference: S.R.G. Report AY06 18 Pages )

BUDGET OPERATING COSTS (AGGREGATE)

(Reference: S.R.G. Report FY01 5 Pages )

P R O G R A M C O S T S

### PROGRAM COSTS

(Reference: S.R.G. Report AY05 18 Pages )

Only a few program costs are missing from this report. They will be recovered for the next run.

It should be noted that the costs for Retraining Programs exceed the contracted income from the Department of Colleges and Universities whereas the reverse is true for post-secondary programs. Apprenticeship programs are so planned that income equals expenditures.

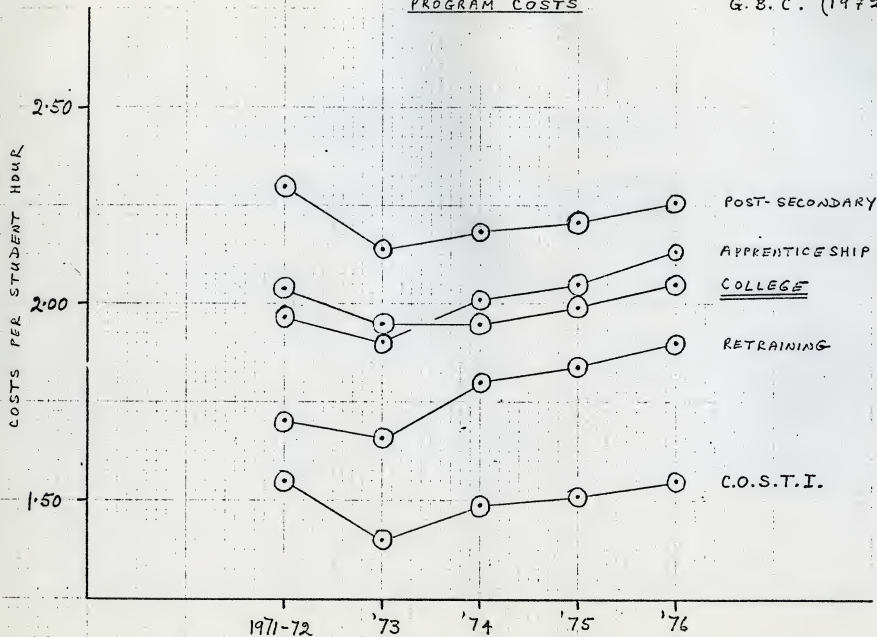
Graph III shows the average hourly student costs of the major program areas.

Graphs IV and V show the distribution of costs amongst major budget areas.



GRAPH III  
PROGRAM COSTS

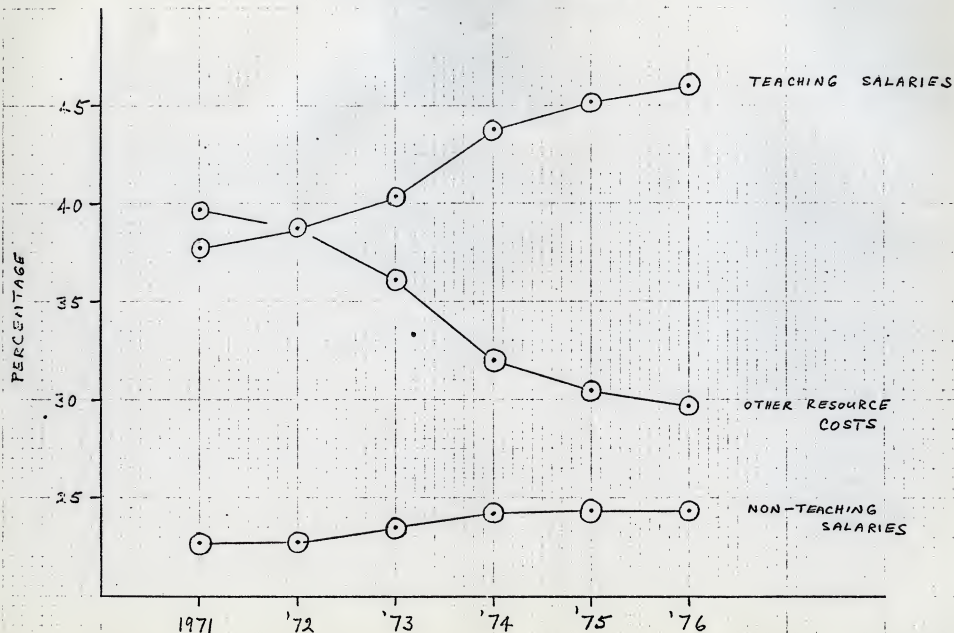
G.B.C. (1972)



GRAPH IV

DISTRIBUTION OF COSTS

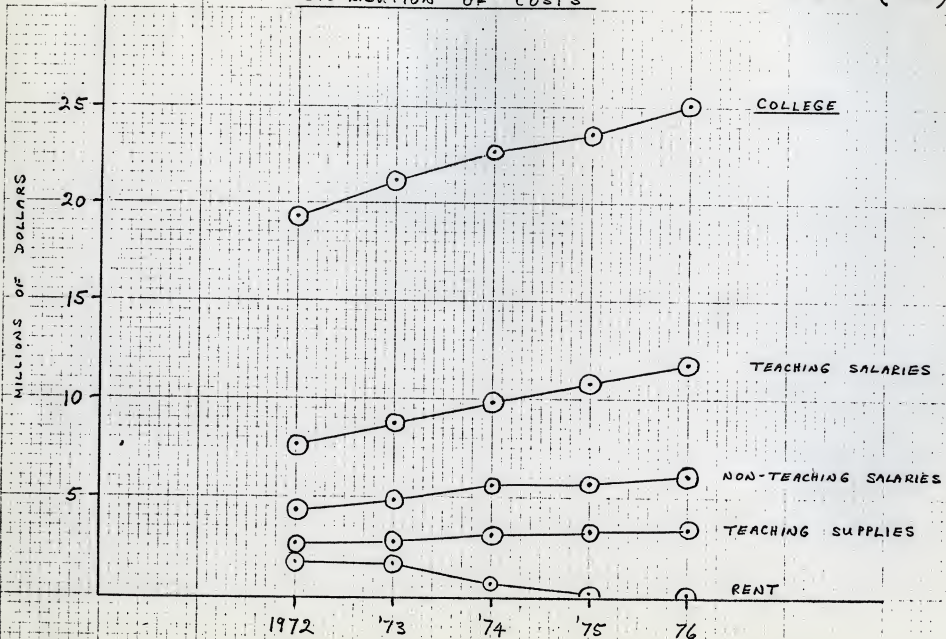
G.B.C. (1972)



GRAPH V

DISTRIBUTION OF COSTS

G.B.C. (1972)





JAN 18 1972

January 19, 1972

Mr. R. Lariviere  
 The Ontario Department of  
 Colleges and Universities  
 Applied Arts and Technology Branch  
 9th Floor  
 Mowat Block, Queen's Park  
 Toronto 182, Ontario

Dear Mr. Lariviere:

Further to our telephone conversation of January 19,  
 we hereby confirm the figures issued at that time.

Estimate of Post Secondary Grant 1972/73

Category I	1300 x .06	780
II	399 x 1.0	399
III	1309 x 1.2	1,571
IV	151 x 2.0	302
	<u>3,159</u>	<u>3,052</u>
K Factor	x 106	
	= 3,235	
	x \$1,765	
		= \$5,709,775
Rent 35.4% of \$1,700,000	=	601,800
Less Tuition Fees		
\$150 x 3159	=	<u>473,850</u>
Net Grant	\$5,836,725	

*P. J. Morgan*  
 P. J. Morgan,  
 Comptroller

## R E F E R E N C E S

1. AHAMAD, A Projection of Manpower Requirements to 1975,  
Department of Manpower and Immigration, 1969.
2. MELTZ, Manpower in Canada 1931-1961 - (Historical  
Statistics of the Canadian Labour Force),  
Department of Manpower and Immigration 1969.
3. MELTZ & PENZ, Canada's Manpower Requirements in 1970,  
Department of Manpower and Immigration 1968.
4. GREEN, Occupational Trends in Ontario 1931 - 1961,  
Ontario Department of Labour 1967.
5. ATKINSON, BARNES, RICHARDSON, Canada's Highly Qualified  
Manpower Resources,  
Department of Manpower and Immigration 1970.
6. ALAM, Full-time Post-Secondary Enrolments in CAAT on May 31, 1970,  
Ontario Department of Colleges & Universities 1971.
7. WATSON & QUAZI, Ontario's Universities & Colleges Enrolments  
to 1981-82,  
Ontario Institute for Studies in Education.
8. MACDONALD, Technological Change & Manpower requirements to  
1975, (Ontario's Mechanical Construction Industry),  
Ontario Department of Labour 1971.